

Unit 12

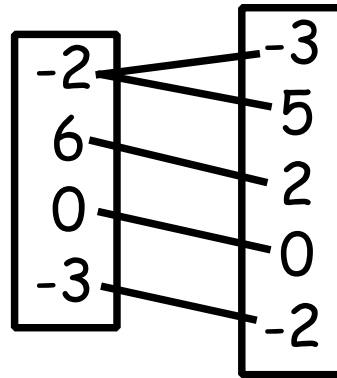
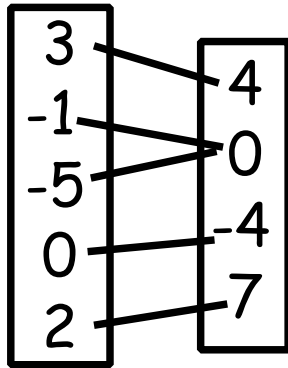
Day 2

Functions

Section 3.2 from textbook

Function: is a relation that assigns to each element of the domain exactly one element of the range.

Which of the following is a function? Why?



Determine if the relations are functions:

1)

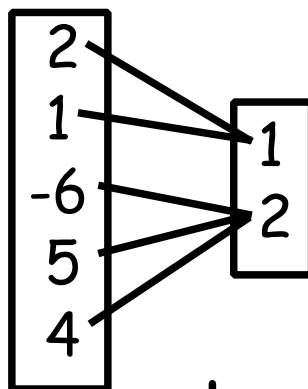
$m = \{(3, 3), (5, 2), (-4, -5), (-1, 2), (5, -5)\}$  No

2)

x	y
1	2
5	3
6	2
0	0

yes

3)



yes

Which of the following relations is a function?

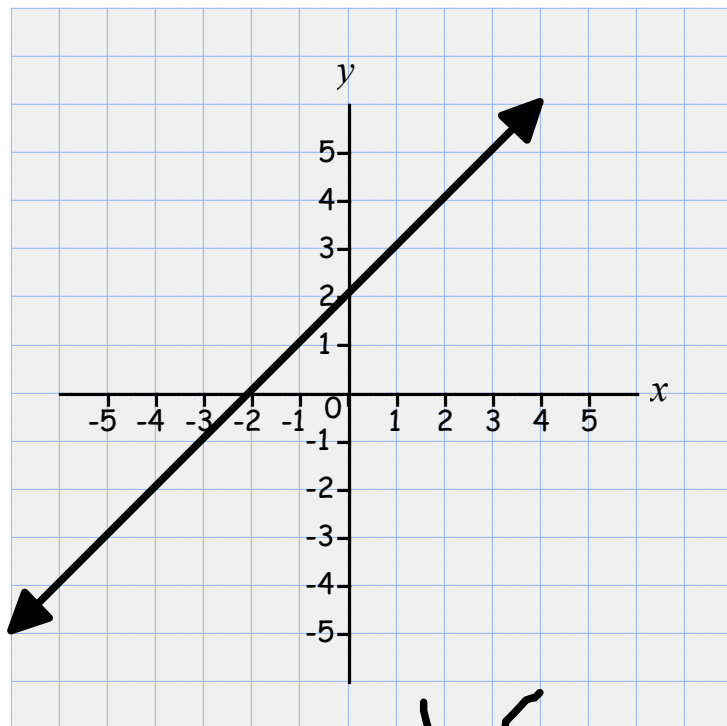
**PAIRING OF AGES WITH HEIGHTS FOR *DIFFERENT* PEOPLE**

	Age (years)	Height (inches)
CHAD	14	68
TWAN	11	64
JOSHUA	13	65
SAM	16	72
SARAH	15	64
PAUL	14	67
MIKE	15	66
CRYSTAL	12	62

**PAIRING OF AGES WITH HEIGHT FOR THE *SAME* PERSON**

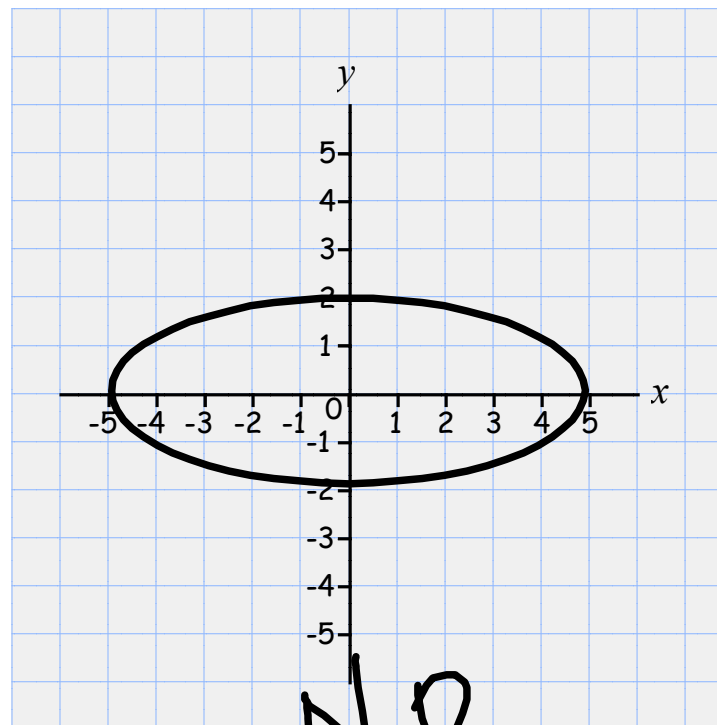
Josh's age	Height (inches)
11	63
12	64
13	65
14	70
15	72
16	72

Ex4:



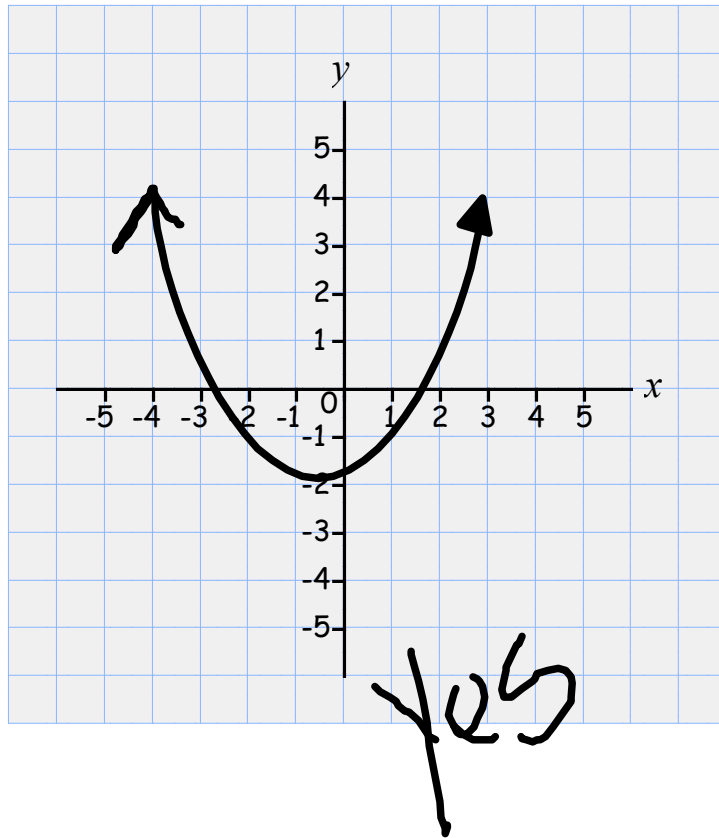
yes

Ex5:

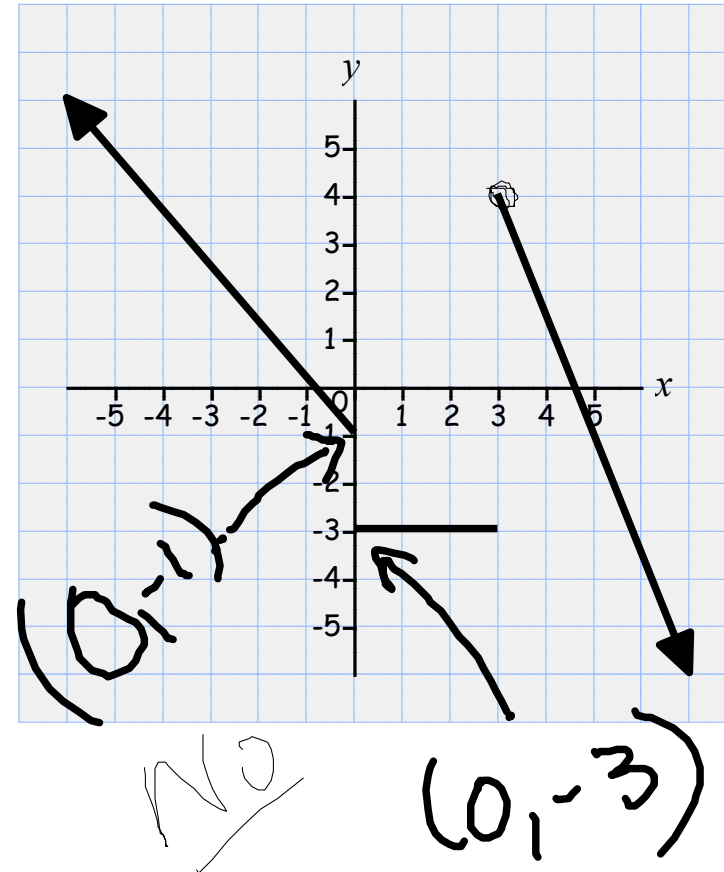


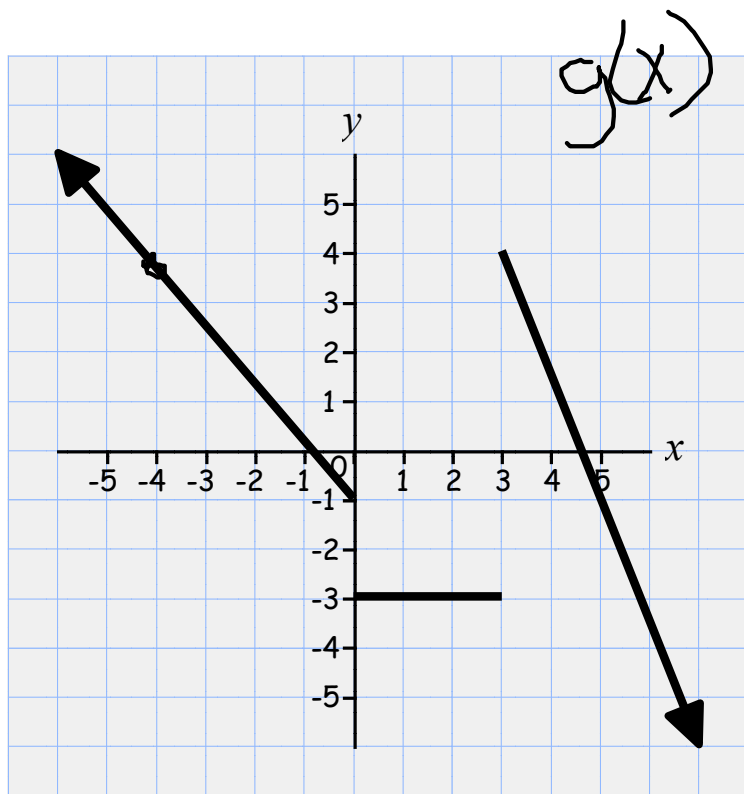
No

Ex6:



Ex7:





$$y = 2x + 4$$

$$f(x) = 2x + 4$$

If the graph on the left represents  $g(x)$  find the following values:

$$g(1) = -3$$

$$g(-4) = 3.75$$

$$g(3) = -3 \text{ or } 4$$

$$g(-1) + g(5) = .25 + -1 = -.75$$

$$f(2) = 2(2) + 4 = 8 \quad (2, 8)$$

## Function notation:

$$y = 3x - 4$$
$$f(x) = 3x - 4$$

$$y = 2x^2 - 3$$
$$g(x) = 2x^2 - 3$$

$$y = |2x - 1|$$
$$h(x) = |2x - 1|$$

## Evaluate:

$$1) f(2) = 3(2) - 4 = 2$$

$$2) g(2) = 2(2)^2 - 3 = 5$$

$$3) h(2) = |2(2) - 1| = 3$$

$$4) f(-1) = 3(-1) - 4 = -7$$

$$5) g(-3) = 2(-3)^2 - 3 = 15$$



## Function notation:

$$y = 3x - 4$$
$$f(x) = 3x - 4$$

$$y = 2x^2 - 3$$
$$g(x) = 2x^2 - 3$$

$$y = |2x - 1|$$
$$h(x) = |2x - 1|$$

## Evaluate:

$$6) h(-3) = |2(-3) - 1| = 7$$

$$7) f(0) - g(1) = -4 - (-1) = -3$$

$$f(0) = 3(0) - 4 = -4$$

$$g(1) = 2(1)^2 - 3 = -1$$

$$8) h(-2) - g(3) =$$

$$|2(-2) - 1| - (2(3)^2 - 3)$$

$$5 - 15$$

$$-10$$

$$9) f(1) + g(0) - h(-3) =$$

$$-1 + -3 - 7 = -11$$

## HOMEWORK:

p. 190-2: 1-34, 41-44